

Page 1

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 7/31/15 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 8/12/15 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: ML3 Date: AUG 14 2015 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*
 Stop *NR2*

SEP 23 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 135498

Wednesday, August 12, 2015 4:31:07 PM

135498

Page 2

Item ID: D135-692-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Bearpaw Wearplate

Stop

NS2

Start Date: 7/31/15 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/12/15 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

130

Packaging

Packaging

0.00

Memo

0.00

Identify and pack for shipping as per PPP D135-692-041

CHG001 Location: **FG 128** PPP Rev:**DAS
02
9-89****SEP 23 2015**

140

140

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

MLS**SEP 24 2015****SA 20150923**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Wednesday, August 12, 2015 4:31:07 PM

Page 1

Work Order ID: 135498

135498

Parent Item: D135-692-041

D135-692-041

Parent Item Name: Bearpaw Wearplate

Start Date: 7/31/15

Required Date: 8/12/15

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A new issue ECN1089 08-02-04 DD verified by:EC
IPP Rev:B ECN 1132 08-02-20 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN4-15A		Purchased	No			120	Each	207.0000	8	8			
---------	--	-----------	----	--	--	-----	------	----------	---	---	--	--	--

AN4-15A

Bolt

DAS
02
9-89

Location

Loc Qty

Loc Code

GA	40	
120449	40	
ST325A	3	
m132317	3	
ST343	164	
m132551	164	

**

DAS
27
9-89

DAS
26
9-89

D3719-041

Manufactured No

D3719-041

Wearplate

DAS
02
9-89

Location

Loc Qty

Loc Code

ST617	3	
121056	3	

**

DAS
27
9-89

DAS
26
9-89

*

B136854

2

SEP 22 2015

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Wednesday, August 12, 2015 4:31:07 PM

Page 2

Work Order ID: 135498

135498

Parent Item: D135-692-041

D135-692-041

Parent Item Name: Bearpaw Wearplate

Start Date: 7/31/15

Required Date: 8/12/15

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

110

Each

2,772.000

8

8

MS21042L4

Locknut

**DAS
02
9-89**

Location

Loc Qty

Loc Code

FP001

2

m124231

2

GA

134

m127813

134

ST260a

170

m130799

56

m131803

6

m132262

108

ST305

2466

m128300

8

m128798

12

m130388

7

m130922

97

m131618

12

m132123

56

m132382

2274

**DAS
27
9-89**

**DAS
28
9-89**

SEP 22 2015

Wednesday, August 12, 2015 4:31:07 PM

Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Wednesday, August 12, 2015 4:31:07 PM

Page 3

Work Order ID: 135498

Parent Item: D135-692-041

Parent Item Name: Bearpaw Wearplate

135498

D135-692-041

Start Date: 7/31/15

Required Date: 8/12/15

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0463J

Purchased

No

120

Each

3,062.000

8

8

NAS1149D0463.J

WASHER

DAS
26
SEP 2 2015

DAS
02
9-89

Location

Loc Qty

Loc Code

GA

41

M129390

41

ST260a

1000

M132677

1000

ST269

2021

M127904

20

M129682

86

M130799

371

M132035

1419

M132317

125

DAS

27

SEP 2 2 2015

Wednesday, August 12, 2015 4:31:07 PM

Shop Packet Print

Page 3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D135-692 REV. A

REF. FAA STC: SR01042SE

The D135-692-041 Wearplate Kit can be installed on Dart D135-692-011 Bearpaw Installations. The D3719-041 Wearplates should be installed on the D3049-1 Bearpaws as shown in Figure 1 on sheet 2 of this service instruction. The bearpaw should otherwise be installed on the skidtube per installation instructions IIN-D135-692 Rev. A.

WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D135-692-041	2.24 lb	0.0 in	0.0 in-lb	199.7 in	447 in-lb
Wearplate Kit	1.0 kg	0.0 m	0.0 m-kg	5.07 m	5.1 m-kg

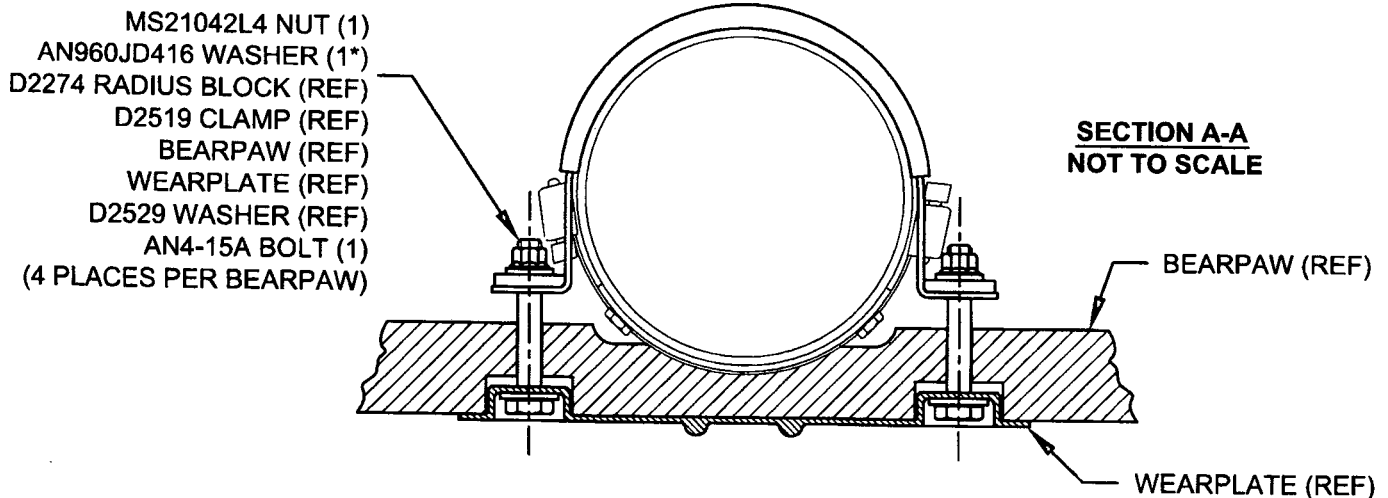
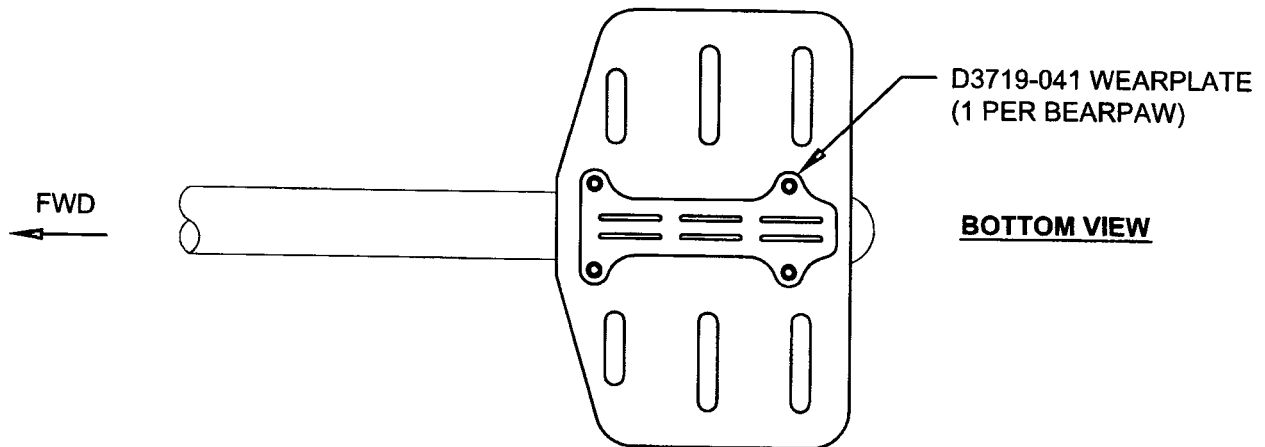
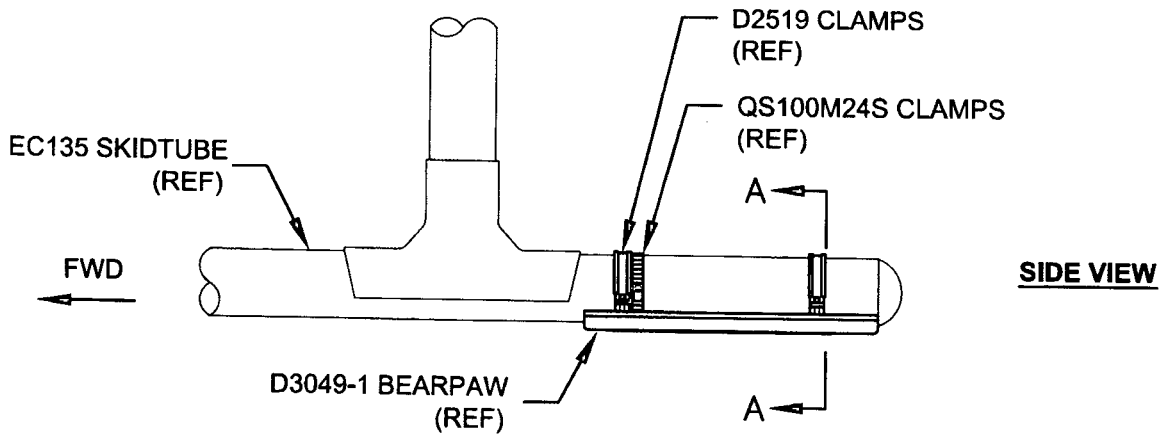
PARTS LIST

QTY	Part Number	Description
X	D135-692-041	Wearplate Kit
2	D3719-041	Wearplate
8	AN4-15A	Bolt
8	AN960JD416	Washer
8	MS21042L4	Nut (or MS21042-4)

SHEET 1 OF 2
 REV. A
 UNCONTROLLED
 SUBJECT TO
 WORK IN PROGRESS
 NO. 135498 MLC
 15-08-14

A	NEW ISSUE	CP	07.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>qp</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>qp</i>		
CHECKED	<i>140</i>	DRAWING NO. REV. A	
MFG. APPR.	<i>EE</i>	DSI 9400 SHEET 1 OF 2	
APPROVED	<i>140</i>	TITLE SCALE	
DE APPR.	<i>711</i>	WEARPLATE KIT NTS	
DATE	07.12.12	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

FIGURE 1: D135-692-041 WEARPLATE KIT



* ADDITIONAL AN960JD416 WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-15A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

DESIGN	90	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	90		
CHECKED	10	DRAWING NO.	REV. A
MFG. APPR.	10	DSI 9400	SHEET 2 OF 2
APPROVED	10	TITLE	SCALE
DE APPR.	10	WEARPLATE KIT	NTS
DATE	07.12.12	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

REFERENCE ONLY

DAS
02
9-89

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D135-692 REV. A

REF. FAA STC: SR01042SE

The D135-692-041 Wearplate Kit can be installed on Dart D135-692-011 Bearpaw Installations. The D3719-041 Wearplates should be installed on the D3049-1 Bearpaws as shown in Figure 1 on sheet 2 of this service instruction. The bearpaw should otherwise be installed on the skidtube per installation instructions IIN-D135-692 Rev. A.

WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
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Wearplate Kit	1.0 kg	0.0 m	0.0 m-kg	5.07 m	5.1 m-kg

PARTS LIST

QTY	Part Number	Description
X	D135-692-041	Wearplate Kit
2	D3719-041	Wearplate
8	AN4-15A	Bolt
8	AN960JD416	Washer
8	MS21042L4	Nut (or MS21042-4)

A	NEW ISSUE	CP	07.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>qp</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>qp</i>		
CHECKED	<i>160</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>E</i>	DSI 9400	SHEET 1 OF 2
APPROVED	<i>160</i>	TITLE	SCALE
DE APPR.	<i>71</i>	WEARPLATE KIT	NTS
DATE	07.12.12	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	